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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/600,588 | 06/19/2003 | Chihiro Izumi | 02196-0292US1 | 5566 |

23973 7590 06/29/2007

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| EXAMINER | |
|---|---|
| IP, SIKYIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1742 | |

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| 06/29/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/600,588 | IZUMI ET AL. | |
| | Examiner | Art Unit | |
| | Sikyin Ip | 1742 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 10/800,025. Although the conflicting claims are not identical, they are not patentably distinct from each other because the area percentage of Cu-Ti intermetallic compound phase, alloy composition, and tensile properties are overlapped.

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of copending Application No. 11/140,425. Although the conflicting claims are not identical, they are not patentably

distinct from each other because the area percentage of Cu-Ti intermetallic compound phase, alloy composition, and tensile properties are overlapped.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants' statement with respect to obviousness-type double patenting rejection is noted. But, said statement fails to provide a reason why obviousness-type double patenting rejection should not be made.

## Claim Rejections - 35 USC § 103

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c ) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. § 103 as being unpatentable over JP 04231447 in view of JP 2001-303158 (PTO-1449) and further teaching of JP 61-124544.

JP 04231447 discloses Cu-Ti composition, grain size, and intermetallic precipitates size (translated copy, page 5, [0004]) and tensile properties (Table II) except for the kind of intermetallic precipitates and their density/area %. However, JP 04231447 discloses Ti and Cu as essential elements so intermetallic precipitates would be formed from said essential elements [0006]. Nonetheless, JP 2001-303158 discloses Cu3Ti phase would form during age-hardening (page 2 [0002]). JP 61-124544 discloses area % and sizes (from 1 μm to over 10 μm) of intermetallic compound in Ti containing Cu alloy (Table 1, especially alloy O). As are evinced by cited references that the recited properties are merely conventional properties that inherently possessed by the conventional alloy composition and steps of age-hardening.

### *Response to Arguments*

Applicant's arguments filed May 22, 2007 have been fully considered but they are not persuasive.

Applicants argue that "~~7.0Al-1.0Ni-1.0Ti, having 3% area of particles ranging from 2 to 6 μm.~~ There is no showing that the particles in question are Cu-Ti intermetallic compounds, as required by claim 1. There is no showing that whatever proportion, if any, of the particles are Cu-Ti ." But, as are evinced by Toe [0006] and Yamamoto [0002] and [0006] that Ti less than 1 wt.% would form Ti compound. Because the instant claimed composition and steps are overlapped by the cited references; consequently, the properties as recited in the instant claims would have inherently possessed by the teachings of the cited

references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

~~correspond to the number of particles per 1000 μm$^2$ specified in claim 1~~. Particles ranging from 2 to 6 μm clearly do not comply with the requirement of claim 1 that the diameter of

Applicants argue that " Cu-Ti intermetallic compounds is 3 μm or less. " But, the range 2 to 6 μm includes 2 to 3 μm which overlaps claimed "3 μm or less."

Applicants argue that

~~Finally, the examiner asserts that "the recited properties are merely conventional properties that are inherently possessed by the conventional alloy composition." That is clearly erroneous~~. Yamamoto's alloys do not have the recited properties. Senda's alloys do not have the recited properties. Toe does not disclose the recited properties. The properties « recited in claim 1 are not only not "inherent," they are novel over all the cited references. » But, applicants have not substantiate their position by factual evidence with 132 declaration.

Applicants' argument in page 5, third full paragraph of instant remarks is noted. But, instant claimed range of grain size "8 μm or less" is much smaller than Yamamoto (0.005 to 0.035 mm). Moreover, Yamamoto is merely cited to show Cu-Ti compound in Cu-Ti alloys is expect to form in the art of cited references.

Applicants argue that

Toe does not assist the examiner, because Toe sets only a maximum particle size, and does not suggest that the titanium, in whatever form, affects the strength of the alloy at all. (In contrast, all the other alloying elements are stated in paragraphs [0008] and [0009] « of Toe to contribute to the strength.) » But, maximum particle size or less overlaps the claimed size. Toe does suggest Ti compound formed with Cu deposit [0006].

[0006]

The mechanism by which the migration phenomenon is thus inhibited has yet to be clarified, although it is estimated that the Cu ion elution volume diminishes in the presence of Ti and that the migration phenomenon between electrodes becomes inhibited due to the hindrance of the current permeation through the deposited Cu particles by the concomitantly generated compound of Ti.

5

Applicants argue that

Senda teaches away from the invention, because it teaches intermetallic particles «larger than 10 μm. ~~(However, it is doubtful whether the ordinary skilled person would~~ " No, Senda merely discloses that area % of particles larger than 10 μm is 5-10%.
Applicants argue that examples of Toe fails to disclose grain size less than 10 μm. Toe teaches grain size less than 30 μm which does not exclude 8 μm or less as claimed. Examples of the cited reference are given by way of illustration and not by way of limitation.

Applicants argue that

Yamamoto does not remedy the deficiency of Toe as to the grain size. Yamamoto «explicitly recites a minimum size of 5 μm. ~~However, Yamamoto has no inventive example~~" But, ordinary skill artisan would recognize instant claimed range "8 μm or less" overlapping 5-8 μm as taught by Yamamoto.

> The examiner argues in the Response to Arguments that the word "comprising" in applicants' claim 1 allows unrecited ingredients "even in major amounts." With respect, that misses the point. The issue at this point in the reasoning is whether Senda's teaching can be combined with Toe's or Yamamoto's teaching. Toe's alloys definitely do *not* have the "unrecited ingredients in major amounts." They have specific quantities of zinc and the like that are an order of magnitude smaller than Senda's. Yamamoto's alloys contain only Cu and Ti, with no additional ingredients. The references do not combine, and the question of whether Senda's composition alone reads on the composition recited in applicants' claim

Applicants argue that " is moot. "

Yamamoto discloses 2 elements in his examples that do not exclude addition of unrecited ingredient in major amounts just as is instant claim.

Conclusion

This is a RCE Application. All claim is drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
June 25, 2007